PATENT
(Docket No. IN-5698)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Serial No.: 10/686,870

Filed: 10/15/03

For: Coating Composition Curable with Ultraviolet Radiation

Group Art Unit: 1711

Examiner: Susan Berman

I hereby certify that the attached correspondence is being deposited by EFS - WEB addressed to Box PCT, Commissioner for Patents, P.O. BOX 1450, Alexandria, Virginia 22313-1450, on the date shown below.

Marjorie Ellis

RESPONSE UNDER 37 CFR § 1.111

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the office action mailed October 6, 2005. Please amend the application as follows. A petition for a three-month extension of time under 37 CFR 1.136(a) accompanies the response.

1 (Currently Amended) A UV radiation curable primer coating composition comprising

a. 5 to 50 % by weight of one or more compounds containing one ethylenically unsaturated free-radically polymerizable group per molecule

b. 5 to 50% by weight of one or more compounds containing two or more ethylenically unsaturated free radically polymerizable groups per molecule

c. 1.0 to 60% by weight of one or more pigments, fillers and or dyes

d. 0.1 to 0.95 % by weight photoinitiators

e. 0 to 20% by weight of volatile organic solvent and

f. 0.1 to 10% by weight of additives,

wherein said coating is curable to a non-tacky surface under only ~~a~~ UVA radiation emitting lamp within 2 minutes and in sunlight within 5 minutes.

2. (Previously Amended) A primer coating composition according to claim 1 wherein the compound (a) is selected from the group consisting of 1-octene, 1-hexene, 1-decene, vinyl acetate, styrene, alpha-methylstyrene, p-methylstyrene, esters of methacrylic acid and esters of acrylic acid and mixtures thereof.

3. (Currently Amended) A primer coating according to claim 1 wherein compound (a) is selected from the group consisting of butyl acrylate, t-butyl acrylate, isobornyl acrylate, isodecyl acrylate, 2-ethylhexyl acrylate, lauryl acrylate, cyclohexyl acrylate ~~and~~ octyl acrylate and mixtures thereof.

4. (Currently Amended) A primer coating composition according to claim 1 wherein compound b is selected from the group consisting of , urethane diacrylates, urethane triacrylates, tetra-functional urethane acrylates ~~and~~ hexa functional urethane acrylates and mixtures thereof.

5. (Previously Amended) A primer coating according to claim 1 wherein compound b is selected from the group consisting of hexanediol diacrylate, tripropyleneglycol diacrylate, trimethylolpropane triacrylate, alkoxylated trimethylolpropane triacrylate, pentaerythritol triacrylate, pentaerythritol tetraacrylate, dipentaerythritol

hexaacrylate, unsaturated polyesters, and mixtures thereof.

6. (Previously Amended) A primer coating according to claim 1 wherein compound b is selected from the group consisting of di-functional, tetra-functional and hexa-functional urethane acrylates and mixtures thereof.

7. (Original) A primer coating composition according to claim 1 wherein the pigment to binder ratio is between 0.8 and 2.0.

8. (Original) A primer coating composition according to claim 1 wherein the pigment to binder ratio is between 1.2 and 1.8.

9. (Original) A primer coating composition according to claim 1 wherein the photoinitiator comprises a compound selected from the group consisting of acyl phospine oxides and benziketals

10. (Original) A primer coating composition according to claim 1 wherein said coating is cured to a tack free surface by 5 minute exposure to outdoor light having an intensity of 45-65 mJoules/cm^2 and demonstrates 95% post humidity test adhesion.

11. (Currently Amended) A process for applying a primer coating composition to a substrate comprising

A. applying a UV radiation curable primer to a substrate;

B. curing the primer with a source selected from the group consisting of one or more UV lamps having a UV-B:UV-A ratio of 1:1 or less, ~~and~~ natural outdoor light having a wavelength between 320 and 430 nm, and mixtures thereof, to obtain a tack free surface after 2-5 minutes,

wherein the UV radiation curable primer comprises

a 5 to 50 % by weight of one or more compounds containing one ethylenically unsaturated free-radically polymerizable group per molecule,

b. 5 to 50% by weight of one or more compounds containing two or more ethylenically unsaturated free radically polymerizable groups per molecule,

c. 1.0 to 60% by weight of one or more pigments, fillers and or dyes,

d. 0.1 to 0.95 % by weight photoinitiators,

e 0 to 20% by weight of volatile organic solvent and

f. 0.1 to 10% by weight of additives.

12. (Currently Amended) A process according to claim 11 wherein the coating applied comprises compound (a) is selected from the group consisting of 1-octene, 1-hexene, 1-decene, vinyl acetate, styrene, alpha-methylstyrene, p-methylstyrene, esters of methacrylic acid, ~~and~~ esters of acrylic acid and mixtures thereof.

13. (Currently Amended) A process according to claim 11 wherein the coating applied comprises compound (a) selected from butyl acrylate, t-butyl acrylate, isobornyl acrylate, isodecyl acrylate, 2-ethylhexyl acrylate, lauryl acrylate, cyclohexyl acrylate, ~~and~~ octyl acrylate and mixtures thereof

14. (Previously Amended) A process according to claim 11 wherein the coating applied comprises compound (b) selected from the group consisting of, urethane diacrylates, tri-functional urethane acrylates, tetrafunctional urethane acrylates and hexa-functional urethane acrylates and mixtures thereof.

15 (Original) A process according to claim 11 wherein the coating applied comprises a pigment to binder ratio between 0.8 and 2.0.

16 (Original) A process according to claim 11 wherein the coating applied comprises a pigment to binder ratio between 1.2 and 1.8.

17. (Original) A process according to claim 11 wherein a UV light source is applied wherein the UVA intensity is from 0.8 to 1.6 Joules/cm^2, and the UVB intensity is from .001 to 0.5 Joules/cm^2.